



MEMBRANE SOCIETY OF AUSTRALASIA

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We are pleased to announce the official formation of the Membrane Society of Australasia (MSA) in 2009. The Australasian region, particularly Australia and New Zealand, have been actively involved in membrane technology for over 30 years.

Key applications over this time have mostly been in water treatment and dairy processing with a strong research capacity also supporting these industries. More recently, there has been a major shift towards internationally recognised research and development, including advanced membrane materials (eg inorganic, polymeric, nanotechnology and electromaterials).

This movement has now acquired a critical mass of researchers and industry, united in their vision of harnessing the potential of membrane technology to provide innovative solutions to the major global issues of water security, climate change and food quality.

The members of the MSA are internationally recognised experts and enthusiastic early career membrane researchers.

We are also pleased to introduce our honorary patron, Prof. Tony Fane of the University of New South Wales, who has been working on membrane technology since arriving in Australia in 1973. His institute is home to the UNESCO Centre for Membrane Science and Technology, which has been carrying out membrane research for more than 20 years. The Centre has built a strong profile and an international recognition as one of largest membrane-based research institutes. Much of the Centre reputation rests on its approach to generic problems from a fundamental engineering science approach incorporating skills from physical chemistry to high level computing. This better understanding of membrane processes allowed the staff of the Centre to actively work with the industrial partners on many membrane applications, such as water and wastewater treatments.

This is an exciting year for the MSA, with the association being formed as a company limited by guarantee in early 2009. An official launch of the society is planned for Tuesday 5 May in Melbourne, Australia, sponsored by Siemens Water Technologies. In the second half of 2009 the inaugural Annual General Meeting will be held, at which all board positions will be up for election.

The MSA is a strong supporter of the Aseanean Membrane Society and looks forward to positively contributing to their activities in future, and of course participating in joint ventures such as hosting of major regional and international conferences.

The MSA is a proud supporter of the Aseanean Membrane Society's 5th conference in Kobe, Japan, later this year.

A selection of membrane activities in Australasia are summarised briefly below:

- Development of composite membranes for water treatment, gas separation and fuel cells — Associate Professor Huanting Wang and Dr Bradley Ladewig, Monash University
- Optimisation of membrane filtration processes in both fouling mitigation and the removal of micro-pollutants for water recycling applications — Dr Long Nghiem, University of Wollongong
- Technical support into manufacturing, both in New Zealand and abroad, maximising the use of membrane filtration — Ross Harnden-Taylor, New Zealand Dairy producer Fonterra.
- Synthesis, design and optimisation of inorganic membranes derived from silica, metal doped silica, templated carbon silica, carbon molecular sieves and perovskite hollow fibres, for applications in high temperature gas processing for clean coal energy delivery such H₂, CO₂ and O₂ separation in membrane contactors and membrane reactors, in addition

to low temperature liquid processing in desalination and biofuels separation — Associate Professor Joe da Costa, The University of Queensland.

- Australia's national science agency, the CSIRO, hosts membrane research and development projects across several industrial sectors including medical and health, manufacturing, food, water, energy and environmental. — Commonwealth Scientific and Industrial Research Organisation.
- Addressing water sustainability via membrane technologies including accelerated seeded precipitation and membrane distillation, compact water treatment systems in rural and remote communities, membrane degradation mechanisms and advanced ceramics materials for desalination — Professor Stephen Gray and Associate Professor Mikel Duke, The Institute for Sustainability and Innovation, Victoria University.
- Design of membranes for achieving optimal oils removal from water using materials such as polycarbonate or alumina. Separation is tuned by adjusting the properties of the surface and pore spaces using self assembled monolayer approaches — Professor Joe Shapter, Flinders University.

The Membrane Society of Australasia Limited
www.membrane-australasia.org

Patron

Prof Tony Fane

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